Luke Woods, EI

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SKILLS

Software & Controls: FANUC CRX Programming, Sensor Integration, PLC Concepts, Basic Circuits, Python, VBA, Arduino
Mechanical Design: Certified SolidWorks Expert (Design, PDM, Simulation), ANSYS Mechanical, GD&T, DFM
Manufacturing: Laser Cutting, Welding, 3D Printing, Sheet Metal Forming, Machining (CNC and Manual), Soldering
Professional: Lean Manufacturing (JIT, Kaizen, 5S), Rapid Prototyping, Project Management, Technical Documentation

WORK EXPERIENCE

Manufacturing Engineer II (MTS NPPD), Genie – Redmond, WA Apr 2025 – Present

- Independently learned FANUC CRX Cobot programming and developed a fastening automation cell, culminating in a prototype demonstration to executive leadership and planned deployment to the assembly line. The scope of work included process flow, program modules, custom end-of-arm tooling, robot-to-torque-controller integration, and validation testing
- Served as manufacturing Cobot SME, authoring SOPs and providing hands-on support and best-practice guidance for cobot automation initiatives across multiple facilities
- Delivered a structured cobot training program for engineering staff covering basic operation, programming logic, 2D vision, and force-control applications, now a formal component of the Engineering Leadership Development onboarding
- Recognized three times with internal Crowning Achievement Awards for rapidly delivering safety-critical parts and for consistently demonstrating servant leadership, collaboration, and responsiveness to team needs

Manufacturing Engineer I (MTS NPPD), Genie – Redmond, WA Aug 2022 – Mar 2025

- Redesigned product assembly line using lean manufacturing principles, SolidWorks, ANSYS, and PFMEA; engineered and integrated 13+ complex assemblies that improved ergonomics, ensured safety compliance, and reduced cycle time by 15%
- Directed internal and supplier design reviews (including external/ODM partners), providing DFM and assembly feedback that standardized components, improved product quality, and reduced unit BOM costs by 6%
- Facilitated weekly cross-functional meetings with production and design engineering teams to track project schedule, manage budgets, and implement risk mitigation strategies
- Managed $75K equipment development budget and coordinated $430K in vendor purchases, achieving 10% cost savings while maintaining quality standards
- Spearheaded the Material Transport Safety Team, tripling safety tool usage by expanding team member training and support tools and improving test processes with rigid body analysis and physical validation

Process Engineering Intern (NPD), Schweitzer Engineering Laboratories, Inc. – Pullman, WA Mar 2020 – June 2022

- Headed thermal profiling and analysis for through-hole and surface mount PCB components on R&D circuit boards
- Designed custom assembly interfaces with client input using SolidWorks, rapid prototyping, and DFM methodologies
- Conducted compliance analysis of parts, according to company and industry standards, using statistical analysis techniques
- Programmed and developed code for continuous data collection monitoring on crucial machinery

PROJECTS

Infrasonic Wildfire Detector, University of Idaho Senior Capstone Design Project – Moscow, ID Aug 2021 – May 2022

- Engineered a compact, maple seed-inspired payload; performed scale model experimental fluid dynamics testing, integrated sensors/PCBs, and managed a $2K development budget

Vandal Atmospheric Science Team Senior Member, University of Idaho – Moscow, ID Aug 2019 – May 2022

- Designed and validated a high-altitude payload cut-down system and developed a tethered launch protocol to ensure safe testing during COVID-19

EDUCATION

Bachelor of Science in Mechanical Engineering, University of Idaho – Moscow, ID May 2022

- 3.97 GPA, Minor in Spanish, UI Honors College, UI Engineering Scholars, Dean's List